

폐전이된 임신 용모막 중앙에 대한 비디오 흉강경 수술

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Video-assisted thoracoscopic surgery for pulmonary metastasis of gestational trophoblastic neoplasia

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Gestational trophoblastic neoplasm (GTN) is prone to pulmonary metastasis. Although most pulmonary metastatic lesions response with chemotherapy, some lesions do not resolve and persist on radiologic investigations. A 25-year-old women was referred for persistent pulmonary metastatic lesion of GTN. Here, we present a case of chemo-resistant choriocarcinoma metastatic to lung managed by video-assisted thoracoscopic surgery.

Key Words: Gestational trophoblastic neoplasm, Thoracic surgery, Video-assisted

Gestational trophoblastic neoplasm (GTN) tends to hematogenous metastasis, especially to the lungs. After several courses of chemotherapy, residual pulmonary lesions have to be managed with further treatments.

The role of surgery for pulmonary metastasis is not fully defined. Thoracotomy sometimes has played a role in the management of pulmonary metastasis. Prior series have reported a wide range for the rate of surgery for pulmonary metastasis in choriocarcinoma ranging from 1% to 17%.¹

As a result of advances in surgical technique, resection of pulmonary metastasis can be accomplished in a less invasive manner with thoracoscopic surgery. We present a case of chemo-resistant choriocarcinoma metastatic to lung managed by video-assisted thoracoscopic surgery.

Case report

The patient is 25-year-old gravida 2 para 0 women. She had a past history of two spontaneous abortion. She visited to a local clinic in 1/25/2005 for amenorrhea for 7 weeks. Her serum β -human chorionic gonadotropin (β -hCG) was 311 mIU/mL. On pelvic ultrasonography, she had a normal appearance of uterus, fallopian tubes, and ovary. Based on the

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patient's history, an ectopic pregnancy was suspected. She received 50 mg/m² methotrexate on 1/28/2005 and was then offered a uterine curettage. The pathologic result of endometrial curettage was consistent with endometrial polyp. Her serum β -hCG rose to 291 mIU/mL over the next 2 weeks. We checked the serum β -hCG weekly and gave the methotrexate injected twice. It rose to 504 mIU/mL on 5/3/2005. She was referred to SAMSUNG Medical Center for further evaluation and treatment. On presentation to the gynecologic oncology service, positron emission tomography (PET) and computerized

tomography (CT) scan of the chest revealed intense focal increased fluoro-D-glucose (FDG) uptake in uterine cavity and two hypermetabolic pulmonary nodules in both upper lungs, suspected metastatic nodule (Fig. 1). The size of two nodule was 2 cm, 1.8 cm respectively. But, no specific abnormalities were found in pelvis MRI. Her serum β -hCG was 620 mIU/mL. On admission, the patient was treated with 5 cycles of etoposide, methotrexate, actinomycin D, cyclophosphamide, and vincristine (EMA-CO) regimen as chemotherapy. Her β -hCG showed the nadir after 2 cycles of chemotherapy and thereafter con-

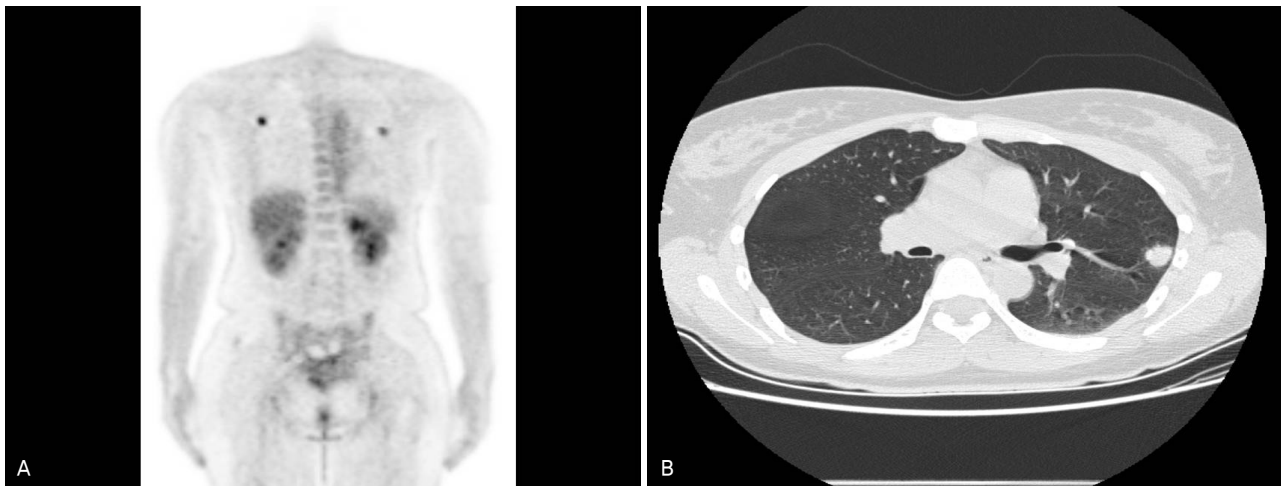


Fig. 1. (A) Positron emission tomography showing pulmonary metastasis of left upper lobe. (B) Chest computerized tomography showing pulmonary metastasis.

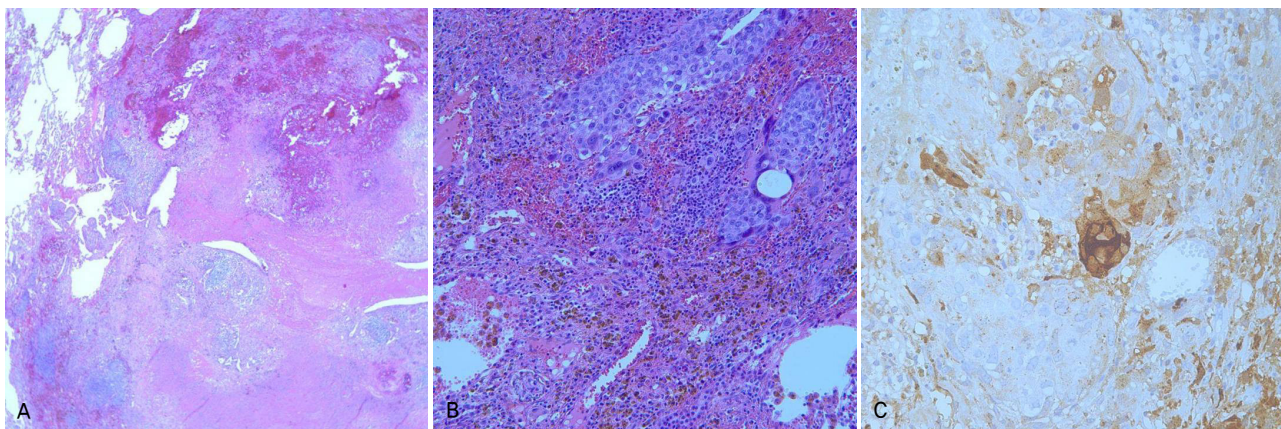


Fig. 2. (A) Low power view of microscopic finding shows diffuse hemorrhage and necrosis of the tumor ($\times 40$). (B) The tumor is composed of cytotrophoblast and syncytiotrophoblastic giant cells with irregular arrangement ($\times 200$). (C) Immunohistochemical stain for β -hCG highlights the cytoplasm of the syncytiotrophoblastic giant cells (hCG $\times 400$).

tinued to normal range to the last cycle. A repeated chest CT and PET demonstrated decreased size of the pulmonary nodules less than 1cm, both and marked decreased of abnormal FDG uptake in uterine cavity. But, on routine following up, serum β -hCG gradually increased to 24,4 mIU/mL on 1/5/2006. and On repeated PET, increased FDG uptake in the pulmonary nodule of left upper lobe was discovered and a pulmonary nodule without significant FDG uptake in the right upper lobe of lung, benign lesion more likely. The patient underwent video-assisted thoracoscopy with pulmonary wedge resection on 2/7/2006. About 1.7cm sized mass was resected from left upper lobe. Resected mass was pathologically revealed with metastatic choriocarcinoma (Fig. 2). Postoperatively, the patient was treated with 2 cycle of adjuvant etoposide, methotrexate, actinomycin D, cisplatin (EMA-EP) regimen as chemotherapy. Her serum β -hCG showed the normal range after surgery. She had been followed with serial PET and serum β -hCG. She was without evidence of disease 46 months after the last chemotherapy.

Discussion

With the development of chemotherapy, the prognosis of choriocarcinoma has been substantially improved; even patients with extensive disease can be salvaged.² Prior series have noted pulmonary metastasis as many as 70% of metastatic GTN.^{1,3} Since the first report by Shirley et al, there have been several reports of the use of thoracotomy in patients metastatic to lung.

The role of surgery in the management of meta-

static GTN has long been controversial. Usually, tumors are treated with chemotherapy alone. However there are numerous refractory cases in which surgical removal of pulmonary metastasis may be important to effect a cure. Surgical resection of pulmonary metastasis of GTN was originally reported by Maier and Taylor.⁴ Because of tendency of GTN to metastasis to the lungs, thoracotomy has been used in the management of local and metastatic disease. Nonetheless, the indications for thoracotomy is not fully defined, and currently, the role of thoracotomy in the management of GTN is limited.

As a result of development in surgical technique, video-assisted thoracoscopic surgery has become accepted a safe and effective procedure to treat wide range of lung diseases. video-assisted thoracoscopic surgery's advantages include less postoperative pain and shorter length of hospital stay.

There were some reports that patients achieved normal β -hCG titer after pulmonary resection and remained in remission without additional chemotherapy.^{1,5} But, our patient with normal β -hCG titer after surgery was given 2 courses of chemotherapy. We suggested that postoperative chemotherapy was essential, especially for chemo-resistant, recurrent patients, because normal β -hCG titer could not have confidence absence of active trophoblastic cells, which could be the origin of recurrence. However, further investigation is needed.

In conclusion, while multiagent chemotherapy is still standard treatment for GTN metastatic to lung, surgical resection with thoracoscopy can be a minimal invasive and effective therapeutic method for patients with chemo-resistant disease.

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= 국문초록 =

임신성 용모막 종양은 폐전이기가 흔히 일어난다. 대부분 폐전이된 질환은 항암치료에 잘 반응하지만, 일부에서는 반응이 없고 방사선 검사상에서 지속적으로 나타난다. 25세 여성이 임신성 용모막 종양의 폐전이된 소견으로 전원되었다. 항암치료에 반응하지 않는 임신 용모막 종양이 폐전이된 경우 비디오 흉강경 수술에 의한 치료 경과를 소개하고자 한다.

중심단어: 임신 용모막 종양, 비디오 흉강경 수술
